

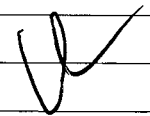
**Work Order ID 143354**

Monday, March 21, 2016 11:57:21 AM

**\*143354\***

Page 1

Item ID: D4151-3 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Upper Hardpoint Plate  
Start Date: 4/1/2016 Start Qty: 12.00 **\*12\*** Cust Item ID:  
Required Date: 4/16/2016 Req'd Qty: 12.00 **\*12\*** Customer:  
Reference:

Approvals: Process Plan:  Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D4151                          | C                        |                      |         |        |              |               |               |                  |                |

105 0.00  
**\*105\*** 12 MAR 21 2016 DAS  
Purchasing 13  
Purchasing Memo 9-89  
ISSUE PO 31764  
CUT PER DRWG D4151 REV.C

115 0.00  
**\*115\*** 1/2x Sp/16-04-01  
Packaging Memo 0.00  
Packaging

125 0.00  
**\*125\*** (12) JAS  
QC Memo 0.00 38  
Quality Control 9-89  
APR 04 2016

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |                                                                                                                                                                           |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                |  |  |                                                                                                                                                                           |  |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | Step #:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  | <b>MRB (QSI042) Approval</b><br><br><br><b>Completed By</b><br><br><br><b>Lead hand / Supervisor Approval Verification</b><br><br><br><b>QC / QA Coordinator Approval</b> |  |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |                                                                                                                                                                           |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |                                                                                                                                                                           |  |  |
| <b>Root Cause</b><br><div style="display: flex;"> <div style="width: 50%;">           Environment <input type="checkbox"/><br/>           Design <input type="checkbox"/><br/>           Doc/Data <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Pre <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Internal Transport <input type="checkbox"/><br/>           Tribal Knowledge <input type="checkbox"/><br/>           LOA <input type="checkbox"/><br/>           Substation <input type="checkbox"/><br/>           Past Expiry Date <input type="checkbox"/><br/>           Misidentified <input type="checkbox"/> </div> <div style="width: 50%;">           No Re-verification <input type="checkbox"/><br/>           Operator <input type="checkbox"/><br/>           Offset/Setup <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Training <input type="checkbox"/><br/>           Use for Testing <input type="checkbox"/><br/>           Poor Information <input type="checkbox"/><br/>           Rushing <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Past Due <input type="checkbox"/> </div> </div> |  | <b>FAULT CATEGORY</b><br><div style="display: flex;"> <div style="width: 50%;">           Pressure/Forced <input type="checkbox"/><br/>           Bending <input type="checkbox"/><br/>           Centre Not Concentric <input type="checkbox"/><br/>           Cracks <input type="checkbox"/><br/>           Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>           Cuffs <input type="checkbox"/><br/>           Crushing <input type="checkbox"/><br/>           Heat Treat <input type="checkbox"/><br/>           Wave/Twist in Tube <input type="checkbox"/><br/>           Marks/Chatter <input type="checkbox"/> </div> <div style="width: 50%;">           Temperature/Cure <input type="checkbox"/><br/>           Set-up <input type="checkbox"/><br/>           BOM/Route <input type="checkbox"/><br/>           Broken/Damage/Defect <input type="checkbox"/><br/>           Inspection Incomplete/Unqualified <input type="checkbox"/><br/>           Contamination <input type="checkbox"/><br/>           Countersink <input type="checkbox"/><br/>           Cut Too Short <input type="checkbox"/><br/>           Instructions Incomplete/Unclear <input type="checkbox"/><br/>           Drill Holes <input type="checkbox"/> </div> </div> |  | <div style="display: flex;"> <div style="width: 50%;">           Power Loss/Surge <input type="checkbox"/><br/>           Folio/Program <input type="checkbox"/><br/>           Grain <input type="checkbox"/><br/>           Weld <input type="checkbox"/><br/>           Wrong Stock Pulled <input type="checkbox"/><br/>           Out of Sequence <input type="checkbox"/><br/>           Off-set <input type="checkbox"/><br/>           Mislabeled <input type="checkbox"/><br/>           Fit/Function <input type="checkbox"/><br/>           Misaligned/off center <input type="checkbox"/> </div> <div style="width: 50%;">           Positioned Wrong <input type="checkbox"/><br/>           Outside Dimensions <input type="checkbox"/><br/>           Over/Under tolerance <input type="checkbox"/><br/>           Part Incorrect <input type="checkbox"/><br/>           Part Lost/Missing <input type="checkbox"/><br/>           Part Moved <input type="checkbox"/><br/>           Drawing <input type="checkbox"/><br/>           Finish <input type="checkbox"/><br/>           Misread <input type="checkbox"/><br/>           Turning Sequence <input type="checkbox"/> </div> </div> |  |  |                                                                                                                                                                           |  |  |
| <input type="checkbox"/> OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |                                                                                                                                                                           |  |  |

**Work Order ID 143354**

Monday, March 21, 2016 11:57:21 AM

**\*143354\***

Page 2

Item ID: D4151-3

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Upper Hardpoint Plate

Start Date: 4/1/2016 Start Qty: 12.00

**\*12\***

Cust Item ID:

Required Date: 4/16/2016 Req'd Qty: 12.00

**\*12\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***  
Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                           | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|----------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 150                            | Identify as per dwg & Stock Location: <u>5X08t</u> | 0.00                 |         |        |              | 12            |               |                  |                |
| <b>*150*</b>                   |                                                    |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo                                               | 0.00                 |         |        |              |               |               |                  | DAS            |
| Packaging                      |                                                    |                      |         |        |              |               |               |                  | 6<br>8-89      |
| 160                            | QC21- Final Inspection - Work Order Release        | 0.00                 |         |        |              |               |               |                  |                |
| <b>*160*</b>                   |                                                    |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                               | 0.02                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                    |                      |         |        |              |               |               |                  |                |

MCS APR 06 2016

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                    |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                    |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Step #:                                                                                                                                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | MRB (QSI042) Approval                                                                                              |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Completed By<br><br><br>Lead hand / Supervisor<br>Approval Verification<br><br><br>QC / QA Coordinator<br>Approval |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>             Environment <input type="checkbox"/><br/>             Design <input type="checkbox"/><br/>             Doc/Data <input type="checkbox"/><br/>             Equip/Tooling <input type="checkbox"/><br/>             Handling/Pre <input type="checkbox"/><br/>             Material <input type="checkbox"/><br/>             Internal Transport <input type="checkbox"/><br/>             Tribal Knowledge <input type="checkbox"/><br/>             LOA <input type="checkbox"/><br/>             Substation <input type="checkbox"/><br/>             Past Expiry Date <input type="checkbox"/><br/>             Misidentified <input type="checkbox"/> </div> <div>             No Re-verification <input type="checkbox"/><br/>             Operator <input type="checkbox"/><br/>             Offset/Setup <input type="checkbox"/><br/>             Supplier <input type="checkbox"/><br/>             Training <input type="checkbox"/><br/>             Use for Testing <input type="checkbox"/><br/>             Poor Information <input type="checkbox"/><br/>             Rushing <input type="checkbox"/><br/>             Product Improvement <input type="checkbox"/><br/>             Process Improvement <input type="checkbox"/><br/>             Manufacturing Process <input type="checkbox"/><br/>             Past Due <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>             Pressure/Forced <input type="checkbox"/><br/>             Bending <input type="checkbox"/><br/>             Centre Not Concentric <input type="checkbox"/><br/>             Cracks <input type="checkbox"/><br/>             Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>             Cuffs <input type="checkbox"/><br/>             Crushing <input type="checkbox"/><br/>             Heat Treat <input type="checkbox"/><br/>             Wave/Twist in Tube <input type="checkbox"/><br/>             Marks/Chatter <input type="checkbox"/> </div> <div>             Temperature/Cure <input type="checkbox"/><br/>             Set-up <input type="checkbox"/><br/>             BOM/Route <input type="checkbox"/><br/>             Broken/Damage/Defect <input type="checkbox"/><br/>             Inspection Incomplete/Unqualified <input type="checkbox"/><br/>             Contamination <input type="checkbox"/><br/>             Countersink <input type="checkbox"/><br/>             Cut Too Short <input type="checkbox"/><br/>             Instructions Incomplete/Unclear <input type="checkbox"/><br/>             Drill Holes <input type="checkbox"/> </div> <div>             Power Loss/Surge <input type="checkbox"/><br/>             Folio/Program <input type="checkbox"/><br/>             Grain <input type="checkbox"/><br/>             Weld <input type="checkbox"/><br/>             Wrong Stock Pulled <input type="checkbox"/><br/>             Out of Sequence <input type="checkbox"/><br/>             Off-set <input type="checkbox"/><br/>             Misabeled <input type="checkbox"/><br/>             Fit/Function <input type="checkbox"/><br/>             Misaligned/off center <input type="checkbox"/> </div> <div>             Positioned Wrong <input type="checkbox"/><br/>             Outside Dimensions <input type="checkbox"/><br/>             Over/Under tolerance <input type="checkbox"/><br/>             Part Incorrect <input type="checkbox"/><br/>             Part Lost/Missing <input type="checkbox"/><br/>             Part Moved <input type="checkbox"/><br/>             Drawing <input type="checkbox"/><br/>             Finish <input type="checkbox"/><br/>             Misread <input type="checkbox"/><br/>             Turning Sequence <input type="checkbox"/> </div> </div> |  |                                                                                                                    |  |
| OTHER : <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                    |  |

# Picklist Print

Monday, March 21, 2016 11:57:21 AM

Page 1  
/

Work Order ID: 143354

**\*143354\***

Parent Item: D4151-3

**\*D4151-3\***

Parent Item Name: Upper Hardpoint Plate

Start Date: 4/1/2016

Required Date: 4/16/2016

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC  
IPP Rev:B 11.01.21 as per dwg revC DD verf:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D4151-3P                        |                        | Purchased     | No          |                     |                  |                 | Each               | 0.0000         |             | 12           |               |                |        |
| <b>*D4151-3P*</b>               |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Upper Hardpoint Plate           |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |
| M304S11GA                       |                        | Purchased     | No          |                     |                  | 100             | sf                 | 121.7250       | 0.055       | 0.694736     |               |                |        |
| <b>*M304S11GA*</b>              |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| 304/316 0.125 Sheet             |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

12x 5p/6-04-01

APR 01 2016  
DAS  
13  
9-85

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| MAT020          | 121.72498      |                 |
| M129545         | 24.82498       |                 |
| M129972         | 21.7           |                 |
| M134284         | 75.2           |                 |

m134604

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



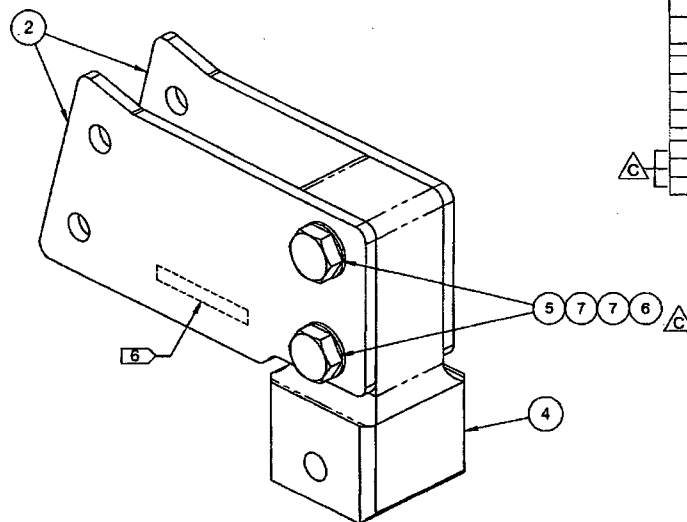
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

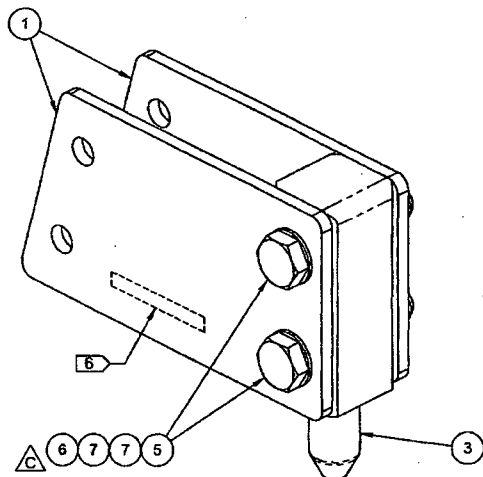
Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                 |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Step #: _____                                                                                                                                                                      | QTY Effective : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | MRB (QSI042) Approval                           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                    | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Completed By                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | Lead hand / Supervisor<br>Approval Verification |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | QC / QA Coordinator<br>Approval                 |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>           Environment <input type="checkbox"/><br/>           Design <input type="checkbox"/><br/>           Doc/Data <input type="checkbox"/><br/>           Equip/Tooling <input type="checkbox"/><br/>           Handling/Pre <input type="checkbox"/><br/>           Material <input type="checkbox"/><br/>           Internal Transport <input type="checkbox"/><br/>           Tribal Knowledge <input type="checkbox"/><br/>           LOA <input type="checkbox"/><br/>           Substation <input type="checkbox"/><br/>           Past Expiry Date <input type="checkbox"/><br/>           Misidentified <input type="checkbox"/> </div> <div>           No Re-verification <input type="checkbox"/><br/>           Operator <input type="checkbox"/><br/>           Offset/Setup <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Training <input type="checkbox"/><br/>           Use for Testing <input type="checkbox"/><br/>           Poor Information <input type="checkbox"/><br/>           Rushing <input type="checkbox"/><br/>           Product Improvement <input type="checkbox"/><br/>           Process Improvement <input type="checkbox"/><br/>           Manufacturing Process <input type="checkbox"/><br/>           Past Due <input type="checkbox"/> </div> </div> |                                                                                                                                                                                    | <b>FAULT CATEGORY</b><br><div style="display: flex; justify-content: space-between;"> <div>           Pressure/Forced <input type="checkbox"/><br/>           Bending <input type="checkbox"/><br/>           Centre Not Concentric <input type="checkbox"/><br/>           Cracks <input type="checkbox"/><br/>           Crimp/Kink/Ripple/Wave <input type="checkbox"/><br/>           Cuffs <input type="checkbox"/><br/>           Crushing <input type="checkbox"/><br/>           Heat Treat <input type="checkbox"/><br/>           Wave/Twist in Tube <input type="checkbox"/><br/>           Marks/Chatter <input type="checkbox"/> </div> <div>           Temperature/Cure <input type="checkbox"/><br/>           Set-up <input type="checkbox"/><br/>           BOM/Route <input type="checkbox"/><br/>           Broken/Damage/Defect <input type="checkbox"/><br/>           Inspection Incomplete/Unqualified <input type="checkbox"/><br/>           Contamination <input type="checkbox"/><br/>           Countersink <input type="checkbox"/><br/>           Cut Too Short <input type="checkbox"/><br/>           Instructions Incomplete/Unclear <input type="checkbox"/><br/>           Drill Holes <input type="checkbox"/> </div> <div>           Power Loss/Surge <input type="checkbox"/><br/>           Folio/Program <input type="checkbox"/><br/>           Grain <input type="checkbox"/><br/>           Weld <input type="checkbox"/><br/>           Wrong Stock Pulled <input type="checkbox"/><br/>           Out of Sequence <input type="checkbox"/><br/>           Off-set <input type="checkbox"/><br/>           Mislabeled <input type="checkbox"/><br/>           Fit/Function <input type="checkbox"/><br/>           Misaligned/off center <input type="checkbox"/> </div> <div>           Positioned Wrong <input type="checkbox"/><br/>           Outside Dimensions <input type="checkbox"/><br/>           Over/Under tolerance <input type="checkbox"/><br/>           Part Incorrect <input type="checkbox"/><br/>           Part Lost/Missing <input type="checkbox"/><br/>           Part Moved <input type="checkbox"/><br/>           Drawing <input type="checkbox"/><br/>           Finish <input type="checkbox"/><br/>           Misread <input type="checkbox"/><br/>           Turning Sequence <input type="checkbox"/> </div> </div> |  |                                                 |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                 |  |





**D4151-043 BASKET FWD HARDPOINT ASSY (UPPER)**



**D4151-041 BASKET FWD HARDPOINT ASSY (LOWER)**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4151-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT:
  - D4151-041 = 0.88 lbs
  - D4151-043 = 1.17 lbs

| ITEM | QTY<br>-041 | QTY<br>-043 | P/N           | DESCRIPTION                       |
|------|-------------|-------------|---------------|-----------------------------------|
|      | X           |             | D4151-041     | BASKET FWD HARDPOINT ASSY (LOWER) |
|      |             | X           | D4151-043     | BASKET FWD HARDPOINT ASSY (UPPER) |
| 1    | 2           |             | D4151-1       | LOWER HARDPOINT PLATE             |
| 2    |             | 2           | D4151-3       | UPPER HARDPOINT PLATE             |
| 3    | 1           |             | D4151-5       | FWD BASKET INSTL STUD (LOWER)     |
| 4    |             | 1           | D4151-7       | FWD EYEBOLT RECEIVER (UPPER)      |
| 5    | 2           | 2           | AN4C13A       | BOLT                              |
| 6    | 2           | 2           | MS21043-4     | NUT                               |
| 7    | 4           | 4           | NAS1149C0432R | WASHER                            |

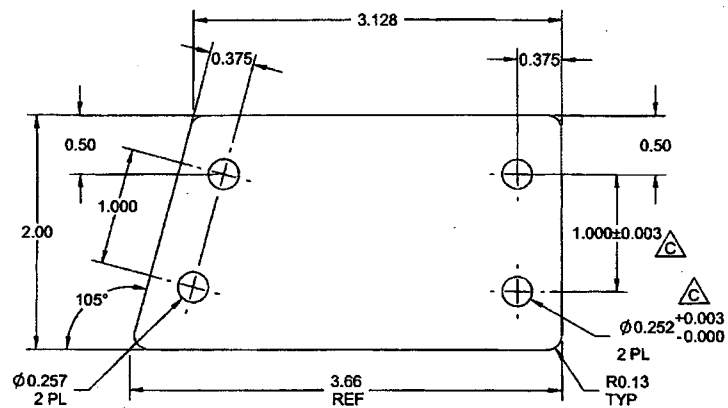
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 143354MLJ  
160316

**RELEASED**  
2011-01-28  
JNP

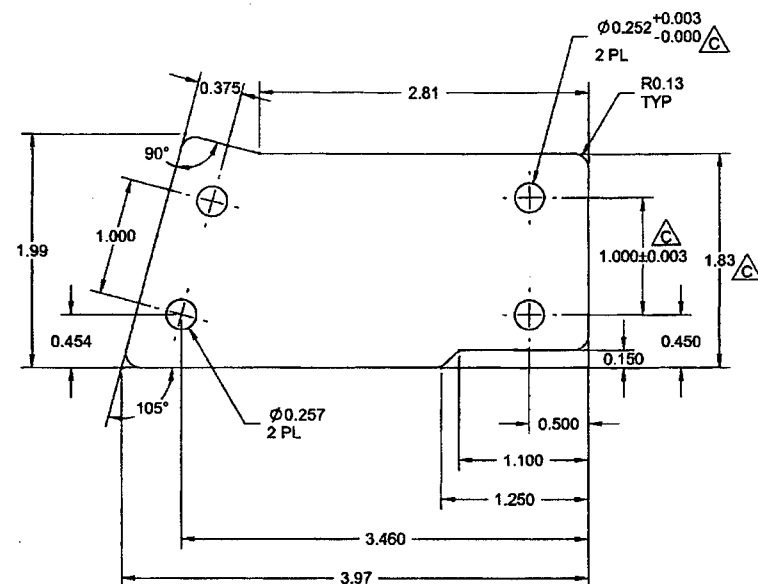
| C                                                                                                                                                                                                                                                                                                                                                                                                                  | AN4 HARDWARE WAS AN3 (B8-1, C3-1 & D3-1); Ø0.252 WAS Ø0.191 (C5-2, D1-2); TIGHTENED TOL ON 1.000 DIM (C5-2, D1-2, C7-3, C3-3); Ø0.250 WAS Ø0.191 (C8-3, B4-3); 1.83 WAS 1.75 (C1-2); 2.84 WAS 2.78 (B3-3) AND 1.88 WAS 1.80 (C1-3) TO PRESERVE 1 SED. REASON: SEE D407-197 DESIGN JOURNAL. | MB | 10.12.14 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| B                                                                                                                                                                                                                                                                                                                                                                                                                  | ADDED D4151-5/7 (SHT 3); D4151-5 WAS D3811-1 (ZN B6-1 & D3-1); D4151-7 WAS D3811-3 (ZN C4-1 & D3-1) ITEMS #5, 6 & 7 REPLACE MS20815-4M20 (ZN C3-1, D3-1 & B8-1); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN C5-2); Ø0.191 2 PL REPLACES Ø0.129 4 PL (ZN D1-2) REASON: SEE TR-D350-007-2 REV. B.  | MB | 10.07.05 |
| A                                                                                                                                                                                                                                                                                                                                                                                                                  | NEW ISSUE                                                                                                                                                                                                                                                                                  | MB | 10.06.22 |
| REV.                                                                                                                                                                                                                                                                                                                                                                                                               | DESCRIPTION                                                                                                                                                                                                                                                                                | BY | DATE     |
| DESIGN                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                            |    |          |
| DRAWN                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                            |    |          |
| CHECKED                                                                                                                                                                                                                                                                                                                                                                                                            | SC                                                                                                                                                                                                                                                                                         |    |          |
| MFG. APPR.                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                            |    |          |
| APPROVED                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                            |    |          |
| DE APPR.                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                            |    |          |
| DATE                                                                                                                                                                                                                                                                                                                                                                                                               | 10.12.14                                                                                                                                                                                                                                                                                   |    |          |
| <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br>DRAWING NO. <b>D4151</b><br>TITLE <b>BASKET FWD HARDPOINT</b><br>SCALE NTS<br>SHEET 1 OF 3<br>REV. C<br>COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR COPIED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                                                                                                                                                                                                                                                                                            |    |          |





0.125  
REF

**D4151-1 LOWER HARDPOINT PLATE**



0.125  
REF

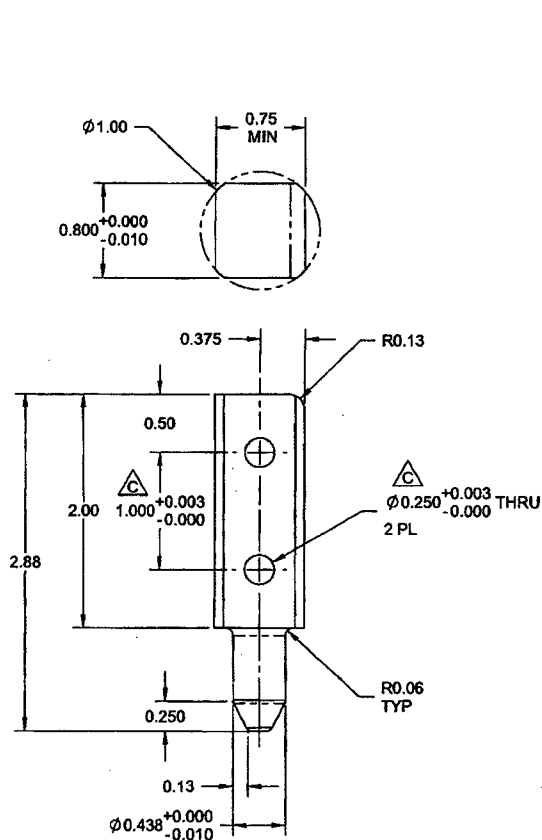
**D4151-3 UPPER HARDPOINT PLATE**

# NOTES:

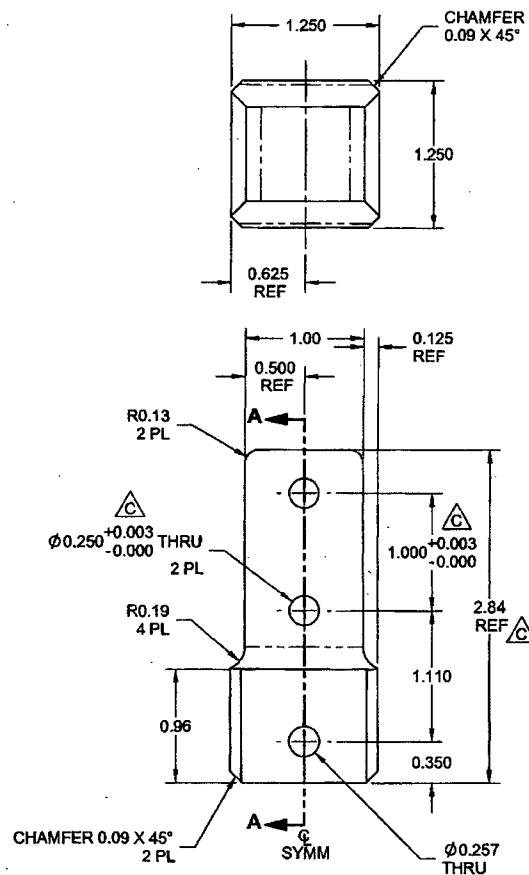
- 1) MATERIAL: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.125 THK  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF. DART SPEC. M304S11GA OR M303S11GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT ASSEMBLY
- 7) WEIGHT:  
- D4151-1 = 0.24 lbs  
- D4151-3 = 0.23 lbs

|            |          |                                                                                                                                                                                                          |              |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                |              |
| DRAWN      |          | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                              |              |
| CHECKED    |          | DRAWING NO.                                                                                                                                                                                              | REV. C       |
| MFG. APPR. |          | <b>D4151</b>                                                                                                                                                                                             | SHEET 2 OF 3 |
| APPROVED   |          | TITLE                                                                                                                                                                                                    | SCALE        |
| DE APPR.   |          | <b>BASKET FWD HARDPOINT</b>                                                                                                                                                                              | NTS          |
| DATE       | 10.12.14 | COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS UNCLASSIFIED AND IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM WITHOUT<br>WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

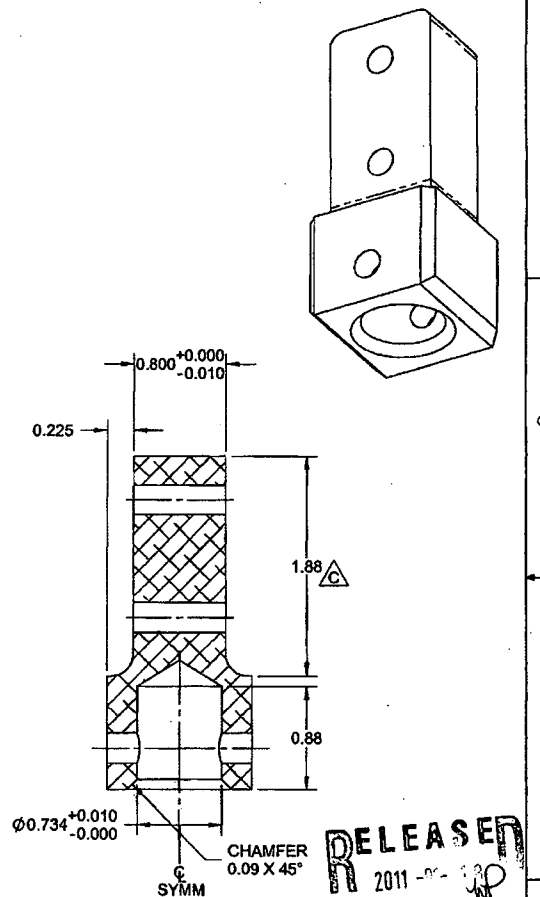
**RELEASED**  
2011-01-18  
JMD



**D4151-5 FWD BASKET INSTL STUD (LOWER)**



**D4151-7 FWD EYEBOLT RECEIVER (UPPER)**



**SECTION A-A**

**NOTES:**

- 1) MATERIAL -5: 303/304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276 OR ASTM A582  
PER DART SPEC M303R OR M304R
- 7: 303/304/316 STAINLESS STEEL BAR, PER ASTM A276 OR ASTM A582  
PER DART SPEC M303B OR M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT ASSEMBLY
- 7) WEIGHT -5: 0.36 lbs  
-7: 0.70 lbs

|            |          |                                                                                                                                                                                                                                                                                |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     |          | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                      |              |
| DRAWN      | JS       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                    |              |
| CHECKED    | SC       | DRAWING NO.                                                                                                                                                                                                                                                                    | REV. C       |
| MFG. APPR. |          | <b>D4151</b>                                                                                                                                                                                                                                                                   | SHEET 3 OF 3 |
| APPROVED   |          | TITLE                                                                                                                                                                                                                                                                          | SCALE        |
| DE APPR.   |          | <b>BASKET FWD HARDPOINT</b>                                                                                                                                                                                                                                                    | NTS          |
| DATE       | 10.12.14 | COPYRIGHT © 2010 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |              |

**RELEASED**  
2011-07-10  
**RELEASED**



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO31764

Purchase Order Date 3/21/2016

PO Print Date 3/21/2016

Page Number 10 of 11

**Order From :**

VC-TPI001

TPI INDUSTRIES INC.  
148 RUE GOODFELLOW  
DELSON, QUEBEC J5B 1V4  
CANADA

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 450-633-0484

**Ship To Contact**

**Ship To Phone**

**Ship Via:** —

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Line Total: \$238.00**

24 D4151-3P

Upper Hardpoint Plate

4/6/2016

FN

12.00

\$6.00

\$72.00

Yes

4/6/2016

Each

*rec'd*

CUT AS PER DWG D4151 REV. C

B141612-X-30 PCS

B143354 X 12 PCS

MATERIAL 304 SHEET 11 GA

*SP 16-01-01*

**Line Total: \$72.00**

25 D2232-3P

Basket Hinge

4/6/2016

FN

15.00

\$3.95

\$59.25

Yes

4/6/2016

Each

*SP 16-01-01*

CUT AS PER DWG D2232 REV. C

B143693

MATERIAL 304 SHEET 11 GA

**Note:**

3/21/2016

# T.P.I. INDUSTRIES INC.

148 GOODFELLOW  
DELSON, QUÉBEC J5B 1V4  
CANADA  
Tel: (450) 633-0484  
Fax: (450) 633-0879

## Packing Slip

Packing Slip No.: 7436  
Date: 2016-03-29  
Page: 1

### Sold to:

#### Dart Aerospace

Chantal Lavoie  
1270 Aberdeen  
Hawkesbury, Ontario K6A 1K7  
Canada

### Ship to:

Dart Aerospace  
Chantal Lavoie  
1270 Aberdeen  
Hawkesbury, Ontario K6A 1K7  
Canada

Order No.: 31764

Sold By: JONATHAN LESSARD

Shipped By:

Ship Date: 2016-03-30

Tracking No.:

| Item No             | Unit   | Description                       | Quantity |
|---------------------|--------|-----------------------------------|----------|
| D2281 ✓             |        | jack saddle ✓                     | 80 ✓     |
| D2585 ✓             |        | latch clamp ✓                     | 65 ✓     |
| D3637-041 ✓         |        | bracket assy ✓                    | 12 ✓     |
| D4060-1 ✓           |        | ski clamp ✓                       | 132 ✓    |
| D4176-1 ✓           |        | 429 clamp ✓                       | 8 ✓      |
| d2232-3 ✓           | Chaque | d2232-3 basket hinge ✓            | 15 ✓     |
| d2581 ✓             |        | mounting bracket ✓                | 68 ✓     |
| D3191-1 → D3198-1 ✓ |        | fitting ✓                         | 10 ✓     |
| D3405-041 ✓         |        | ground handling lug ✓             | 32 ✓     |
| D3405-043 ✓         | Chaque | ground handling lug ✓             | 6 ✓      |
| d3561-1 ✓           | Chaque | d3561-1 seal insert tool ✓        | 6 ✓      |
| d3912-5 ✓           | Chaque | d3912-5 eyebolt plate ✓           | 30 ✓     |
| d4021-1 ✓           | Chaque | d4021-1 handle plate ✓            | 14 ✓     |
| d4148-1 ✓           | Chaque | d4148-1 crosstube lug plate fwd ✓ | 44 ✓     |
| d4149-1 ✓           | Chaque | d4149-1 crosstube lug plate aft ✓ | 20 ✓     |
| d4150-3 ✓           | Chaque | d4150-3 arm plate ✓               | 8 ✓      |
| d4151-1 ✓           | Chaque | d4151-1 lower hardpoint plate ✓   | 40 ✓     |
| d4151-3 ✓           | Chaque | d4151-3 upper hardpoint plate ✓   | 12x 42 ✓ |

Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days

*Sp/b ai-01*

# THYSSENKRUPP MATERIALS NA

DART AEROSPACE

STAINLESS STEEL SHEET 304L-2B DUAL GRADE  
 .1200 Nom X 48.0000" X 96.0000"  
 PART NO.

PO/Rel 31741

We certify that this is a true copy of the report  
 furnished by the producer of the metal, or data  
 resulting from tests made in approved labs.

## Certificate of Mill Test Results

BL PEC-983229-002

21Mar16

Pg 1/1



### METALLURGICAL TEST REPORT

North American Stainless Canada Inc.  
 740 Imperial Road North  
 Guelph, ON N1K1Z3  
 Canada

740 Imperial Road North

Certificate: 117938 1

Customer: 007206 001

Mail To:

THYSSENKRUPP MATERIALS  
 2821 LANGSTAFF ROAD  
 CONCORD, ON L4K5C6

Ship To:

THYSSENKRUPP MATERIALS  
 2821 LANGSTAFF ROAD  
 CONCORD, ON L4K5C6

Date: 11/26/2015 Page: 1

Steel: 304/304L

Finish: 2B

Corrosion: ASTM A262/14;180Bend-OK

Your Order: PEC271093

NAS Order: WN 0072789 07

#### PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403  
 ASTM A240/15a,A480/14b,A666/15;ASME SA240/13,SA480/13,SA666/13  
 CHEM ONLY ON FOLLOWING ASTM: A276/13,A479/13a,A484/13a,A312/13  
 CHEM ONLY ON FOLLOWING ASME: SA312/13,SA479/13  
 AMS 5511H/5513J XMRK; MIL-5059D AMD3(X CRN MEAS); MIL-4043B  
 NACE MR0175/ISO 15156-3:2009 A, MR0103/07;Q65766D-A X MAG PERM  
 MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

#### REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.  
 EN 10204:2004 3.1; RoHS 1 & 2 Compliant  
 Material is Free of Radioactive Contamination  
 Steel Making Process: EAF, AOD, & Cont. Casting  
 Product Mfg.by a Quality Mgt.Sys. in Conf. w/ISO 9001  
 \*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

| Product Id | Coil #   | Skid # | Thickness | Width   | Weight | -----Length----- | Mark   | Pieces | Commodity Code |
|------------|----------|--------|-----------|---------|--------|------------------|--------|--------|----------------|
| 02X2A3 DA  | 02X2A3 D |        | .1163     | 48.0000 | 4,970  | SHEETS           | 096.00 | 32     |                |

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323

#### CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Chemical Analysis per ASTM A751/08

| HEAT | CM | C %   | CR %    | CU %  | MN %   | MO %  | N %   | NI %   | P %   | S %   |
|------|----|-------|---------|-------|--------|-------|-------|--------|-------|-------|
| X2A3 | US | .0270 | 18.2380 | .3950 | 1.7650 | .3735 | .0830 | 8.0045 | .0340 | .0010 |
|      |    | SI %  |         |       |        |       |       |        |       |       |
|      |    | .2375 |         |       |        |       |       |        |       |       |

#### MECHANICAL PROPERTIES

| Product Id# | Coil #   | 1 d<br>o i<br>c r | UTS<br>KSI | 20C<br>KSI | .2% YS<br>KSI | 20C<br>KSI | ELONG<br>%-2" | %<br>Hard<br>RB | Tail<br>Hard |
|-------------|----------|-------------------|------------|------------|---------------|------------|---------------|-----------------|--------------|
| 02X2A3 DA   | 02X2A3 D | F T               | 92.66      |            | 44.92         |            | 51.32         | 86.00           | 87.00        |

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy  
 of the test methods used, the material meets the specifications stated. These results relate only to the items  
 tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
 Dept. Mgr.

*ABH*  
 ABH/FEET BHAVE - 11/26/2015

STAINLESS STEEL SHEET 304L-2B DUAL GRADE  
.0750 Nom X 48.0000" X 120.0000"  
PART NO.

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

## Pg 1/1

Signed by: \_\_\_\_\_



No.600,Xinglong St., Jixing Vill., Gangshan Dist.,  
Kaohsiung City 82057, Taiwan (R.O.C)

Specification/Steel Grade : DIN EN 10028-7 1.4301/1.4307\_C  
Surface Finish : No.2B

1. We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification.
2. The material described above has been detected with free irradiation.
3. VISOI has established a QMS according to ISO 9001 which is certified by DNY CERT (reg.-no.0058-2002-XQ-PGC-KT1)
4. Inspection and gauge measurement: Satisfactory
5. The report can only be reproduced in full.
6. This certificate complies to 3.1/DIN EN 10204:2005.
7. The tests including "Tensile Test", "Intergranular Attack" (i.e. TEST) have been accredited by A2LA TESTING CERT #0058.02).

F. A. Hudson

JA-A-91